DEPARTMENT OF PUBLIC UTILITIES

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DEVELOPMENT STANDARDS AND REQUIREMENTS FOR STREETLIGHTS AND OTHER UTILITIES

These development requirements are as of July 15, 2015 and are subject to change.

The following is a list of typical Public Utility development requirements for the streetlights and other utilities portion. Some of the items may not apply. Additional requirement may be applied depending on the location of the property. The developer shall be required to submit utility drawings (24"X36") for review and approval. Drawings shall include all information as required in the Preliminary Letter.

It is anticipated that when all requirements of the Public Utilities Department have been met, a Public Utilities Final Approval Letter will be issued. Signing by the developer or his/her representative will be required. A drawing/drawings, signed, as approved by the City and the developer shall be issued for use by the developer and his contractor. Signing of the Public Utilities Final Approval letter, payment of fees, and posting of a bond must be completed prior to beginning construction work on the site.

STREET LIGHTS:

1. As per Sandy City Ordinance 01-8, the developer may be required to install a residential or arterial streetlight along their frontage per Sandy City Standards and Specifications. Locations of the streetlight will be determined during the Preliminary Review.

UTILITIES:

For Residential:

1. To comply with Sandy City Ordinance 15A-21-19A, All utilities which will serve the parcel being subdivided shall be buried beneath the surface of the ground and shall be located within the easements provided for such use or within the streets at a location to be determined by the City.

For Commercial

1. To comply with Sandy City Ordinance 15A-23-12, All utility lines shall be placed underground in designated easements. No pipe, conduit, cable, line for water, gas, sewage, drainage, steam, electricity, or any other energy or service shall be installed on a

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permanent basis above ground. However, back flow devices have to be installed above ground. Therefore, no pole or other support structure shall be erected, altered, or replaced upon any lot (outside of any building) above the surface of the ground except for hoses, movable pipes used for irrigation or other purpose during construction.

2. Each contractor and owner/developer shall be responsible to know the whereabouts of all underground utilities. Protection of such utilities shall also be their responsibility. Prior to construction, contact must be made with "Blue Stakes" to identify underground utility lines.

3. Where overhead poles exist, service lines to new developments must be placed underground from the nearest overhead service pole.

4. All utility lines associated with the pre-existing utility pole(s) shall be placed underground across the frontage of the development.

5. All utility boxes, e.g., transformers, switch gear, telephone, cable tv, back flow preventers, etc., shall be shown on the site plan and utility plan and shall be placed a minimum of 5 feet from any sidewalk or parking lot curbing. Said utility boxes shall not be located within any required traffic sight triangle(s), as determined by the Sandy City Transportation Engineer and shall be screened from view with appropriate landscaping or architectural elements compatible in material and color with the primary structure. Each box shall be shown in its exact location and shall be noted with its exact height, width, and length. (Ord 09-01, Amended 3-5-2009)

6. The developer should contact Rocky Mountain Power for installation service, charges, permits, and related items that they will require for developments that are within Sandy City's borders.

WATER EFFICIENT LANDSCAPE:

Documentation

A Landscape Plan Documentation Package shall be submitted to and approved by the Sandy City Public Utilities Department as part of the final review process. The Landscape Plan Documentation Package shall consist of the following items:

1. Planting Plan. A detailed Planting Plan shall be drawn at a scale that clearly identifies the following:

    - Location of all plant materials, a legend with botanical and common names, and size of plant materials
    - Property lines and street names
    - Existing and proposed buildings, walls, fences, light poles, utilities, paved areas and other site improvements
    - Existing trees and plant materials to be removed or retained

- Designation of Landscape Zones

2. Irrigation Plan. Irrigation plans shall be prepared and stamped by a licensed landscape architect or a licensed landscape designer. A detailed Irrigation Plan shall be drawn at the same scale as the planting plan and shall contain the following information:

   - Layout of the irrigation system and a legend summarizing the type and size of all components of the system, including manufacturer name and model numbers
   - Static water pressure in pounds per square inch (psi) at the point of connection to the public water supply
   - Flow rate in gallons per minute and design operating pressure in psi for each valve and precipitation rate in inches per hour for each valve with sprinklers
   - Location and Size of Water Meter, which shall be used exclusively for landscape purposes;
   - Location of the point of connection, sprinkler heads, backflow prevention device, main and lateral irrigation lines, quick couplers, irrigation controller and moisture sensor overriding device;
   - Size and flow rate of each irrigation zone, valve and sprinkler head; Static water pressure at point of connection; and Symbols, brand name and model number for each sprinkler head and irrigation device.

3. Grading Plan. A Grading Plan shall be drawn at the same scale as the Planting Plan and shall contain the following information:

   - Property lines and street names, existing and proposed buildings, walls, fences, utilities, paved areas and other site improvements
   - Existing and finished contour lines and spot elevations as necessary for the proposed site improvements

4. A Soils Report will be required where irrigated landscaped areas consisting of grass or similar turf exceed 33% of the overall landscaped area. The Soils Report shall describe the depth, composition, and bulk density of the top soil and subsoil at the site, and shall include recommendations for soil amendments. The Planting Plan shall incorporate the recommendations of the Soils Report into the planting specifications.

5. Landscape Water Allowance. The annual Landscape Water Allowance shall be calculated using the following equation:

   Landscape Water Allowance = ET_O x 1.0 x 0.62 x A

   Where Landscape Water Allowance is in gallons per growing season

   ET_O = Reference Evapotranspiration in inches per growing season
   1.0 =ET_O adjustment factor, 100% of turf grass ET_O (growing season adjustment factor)
   0.62 = conversion factor

A = total Irrigated Landscape Area in square feet

6. Irrigation Schedule. A monthly Irrigation Schedule shall be prepared that covers the initial 90-day plant establishment period and the typical long-term use period. This schedule shall consist of a table with the following information for each valve:

- Plant type (for example, turf, trees, low water use plants)
- Irrigation type (for example, sprinklers, drip, bubblers)
- Flow rate in gallons per minute
- Precipitation rate in inches per hour (sprinklers only)
- Run times in minutes per day
- Number of water days per week
- Cycle time to avoid runoff

Landscape Design Standards
Design landscape according to the following criteria - refer to Ordinance 15-41 for additional information:

1. Plants are well-suited to microclimate and soil conditions at site, are relatively free from pests and diseases, and are generally easy to maintain.

2. Water-Conserving plants are used on slopes exceeding 30 percent.

3. Minimum four-inches of mulch on all irrigated non-turf areas.

Irrigation Design Standards
Design irrigation according to the following criteria - refer to Ordinance 15-41 for additional information:

1. Landscape Water Meter and backflow prevention assembly that are in compliance with state code shall be installed separate from the water meter installed for indoor use. The size of the meter shall be determined based on the irrigation demand. **This meter must be installed after the main meter and shall remain within the Sandy City Easement. The developer shall supply the landscape meter and materials. Show on the utility plan and landscape plan.**

2. Pressure regulator provided where water pressure exceeds manufacturers maximum recommended operating pressure for the sprinkler heads or where significant variation in water pressure will occur.

3. Automatic controller provided with multiple program and repeat cycle capabilities, automatic rain shut-off device, and a flexible calendar program.

4. On slopes over 30 percent, irrigation system shall consist of Drip Emitters, Bubblers or Sprinklers with a maximum Precipitation Rate of 0.85 inches per hour and adjusted sprinkler cycle times to eliminate runoff.

5. Each valve irrigates area with similar site, slope, and soil conditions and plants with similar water needs. Turf and non-turf areas irrigated on separate valves.

6. Drip Emitters or a Bubbler shall be provided for each tree where practicable. Bubblers shall not exceed 1.5 gallons per minute per device. Bubblers for trees shall be on a separate valve unless specifically exempted by Sandy City Public Utilities due to the limited number of trees on the project. Filters and end flush values shall be provided as necessary.

7. Sprinklers have matched Precipitation Rate within each valve.

8. Check valves specified where low-head drainage will occur due to elevation differences. Pressure compensating values and sprinklers shall be required where a significant variation in water pressure will occur within the irrigation system due to the limited number of trees.

9. Irrigation zones with overhead spray or stream sprinklers shall be designed to operate between 6:00 pm and 10:00 am to reduce water lose from win and evaporation. This would exclude drip or bubbler zones.

10. Following Construction and prior to release of the secondary bond guarantee posted for the project, a Water Use Efficiency Review will be conducted by a Landscape Irrigation Auditor. The auditor shall be independent of the contractor, design firm, and owner/developer of the project. The water performance audit will verify that the irrigation system complies with the minimum standards required by Sandy City ordinance. The minimum efficiency required for the irrigation system is 60% for distribution efficiency for all fixed spray system and 70% distribution efficiency for all rotor systems. The auditor shall furnish a certificate to the City, designer, installer and owner/developer certifying compliance with the minimum distribution requirements. Compliance with this provision is required before the City will release the bond for this project.

If you have any questions with these requirement, please contact Chaleurn “Lennie” Chanthaphuang, P.E. at 801-568-7293.